

## **Abstract:**

**Background:** In 2014, a large systematic map found that relational factors were amongst the most frequently reported facilitators of evidence use in policy. Since then, there has been a growth in evidence-use initiatives and research, many of which have attempted to address relational factors. In this timely updated map, we describe the current state of research about which factors influence evidence use in policy.

**Methods:** A search strategy combining 'evidence', 'barriers and facilitators' and 'policy / policymakers' was used to identify studies across 15 electronic databases between 2012-2022. Studies were screened for those that include empirical data about evidence use in policy. Data extraction enabled descriptive analyses characterising studies in terms of focus, topic area, setting, and types of factors influencing use.

**Findings:** Two thousand, one hundred and ninety-nine (2199) studies were included, a 20-fold increase over 10 years. The most commonly reported factors influencing use were the relevance of evidence, and then organisational (resources, skills, personnel and managerial support). A large number of studies reported on evidence-use interventions (n = 877) of which 379 were evaluations.

**Discussion:** Findings may indicate a shift towards relational and systemic thinking about evidence use. There appears to be a growing recognition of the resourcing, work, time, and workforce required to embed evidence use within and between organisations. With this huge growth in the literature, particularly in new evidence use interventions being tested across policy sectors, continued review and mobilisation is necessary to effectively inform the design and implementation of evidence use interventions and research.

### Key messages:

1. There has been a 20-fold increase in research about factors influencing evidence use in the last 10 years
2. The most frequently-reported factors are relevance of evidence, and organisational factors such as resources, workforce and managerial support.
3. Over 870 evidence-use interventions were identified, of which 379 were evaluations
4. More needs to be done to make the most of existing knowledge to inform evidence use strategies and interventions, to address the global and growing appetite for more effective evidence use.

### **Background:**

Researchers have often tried to identify the factors preventing research evidence from being used by policymakers and practitioners. Much of the research in this area has framed this in terms of barriers and facilitators (Oliver et al., 2014). This framing encourages approaches which target particular factors, which, if addressed, would hasten the uptake of research evidence (Orton, 2011). Such approaches reflect the linear model, whereby research evidence is produced, it is mobilised through various means (such as research dissemination, or stakeholder engagement) and then used to address a policy or practice problem (Best et al., 2010).

It is now recognised that the linear model is an over-simplification of the process by which decision-makers draw on evidence (4, 5) (Etzkowitz, 2006). Best and Holmes (2010) describe this

evolution as 'generations' of thinking about evidence use: Linear, relational and systemic. 'Linear' thinking describes a focus on knowledge production as the primary means to improve evidence use, and ultimately decision-making. In the early 2000s, in the UK and much of the Global North, this thinking translated into a focus on systematic reviews to improve evidence use (6-8) (Oliver, 2001, Perrier et al., 2011, Lavis et al., 2009). This thinking is still evident with much of the funding and activity in the field focusing on research production and evaluation (currently often called Metascience, or Research on Research) (Oliver et al., 2019).

'Relational' thinking, and working, has had a significant impact on how evidence research and practice has evolved, with the last large systematic map of factors influencing evidence identifying relational factors as highly reported (Author 2014). Typically, relational initiatives assume that contact between knowledge users and producers is likely to result in greater trust between stakeholders, the production of useful knowledge, and its use by decision-makers. From the development of fellowship schemes (Kumpunen et al., 2023, Buckley and Oliver, 2024), to initiatives providing networking and match-making opportunities (Crowley et al., 2021), to longer-term collaborations (Armstrong Rebecca et al., 2013, Pettigrew, 2019) the last ten years has seen a huge increase in the number of evidence use initiatives which draw on this type of thinking. Co-production is now much more common in research and knowledge production, reflecting this shift (Turnhout et al., 2020).

Yet, as Best and Holmes argued in 2010, 'systems' thinking may offer a more useful perspective. They argued that conceptualising evidence use as a process that occurs within a complex system more accurately depicts the dynamic process of knowledge (co-)production and evidence uptake - and that this perspective can better inform the design of initiatives (Holmes et al., 2017, Best et al., 2010, Oliver et al., 2022). There is now a general consensus that decision-makers draw upon a wide range of types of knowledge, and that how they do so is a complex, dynamic process (Cairney, 2016, Boaz et al., 2019, Innvaer, 2002).

Why, then, is it worth considering the somewhat linear question of how factors influence evidence use? Thinking about barriers and facilitators can encourage thinking which responds to factors as a menu of targets for interventions, or a pick-and-mix recipe for success. In our view, this type of approach is unlikely to support effective evidence use practice.

It is therefore important to assess the empirical state of evidence in order to inform research and practice. Funders, governments, researchers and practitioners all demonstrate a growing interest in evidence use. There has been a huge growth in evidence use initiatives (Oliver et al., 2022) and in the increase in global attention towards how evidence-using systems can be better supported (Topp et al., 2018, Evidence, 2024, Challenges, 2024). Rather than addressing single factors to improve evidence use, these stakeholders would be better served by an improved understanding of the evidence base to inform their practice.

A 2002 review in this field found that research characteristics such as accessibility, format and relevance were facilitators of evidence use (Innvaer, 2002). In 2014, contact and collaboration, as well as research characteristics were found to be present in the literature, and these findings have influenced practice and research in the field (Oliver et al., 2014). It is now important to assess the last decade of research to see whether researchers have begun to respond to our improved understanding of evidence use as a systemic process, particularly whether there has been a growth in interventions. While a survey of the literature can only provide descriptive findings, it allows us to see how researchers in different fields are thinking about the relationship between evidence production and use. Given the often siloed and disjointed approaches to understanding evidence production and use across fields, by including a focus on systemic factors, this review

will be particularly useful for gaining a comprehensive understanding beyond individual academic disciplines.

### **Methods:**

This is an update of a previous review (Author 2014) and drew on the criteria and data extraction templates. To be included, studies were:

- Published since 2012 (the date of the previous search).
- Empirical research, defined as having some indication of where data presented in the study originated from and how it had been analysed. Commentaries, opinion pieces, and advertorials were excluded.
- About policy, defined as decisions made by a state organisation, or a group of state organisations, at a national, regional or conurbation level. Studies of clinical decision-making for individual patients, or protocols for single clinical sites were excluded.
- About factors influencing the use of evidence (categorised as evidence, organisation and resources, contact and collaboration, policymaker characteristics, policy characteristics or research directly, or others).

We excluded studies in languages other than English due to team resources and the size of the review. Studies were also excluded if they were not published in full (e.g. were conference papers or abstracts), or were theses and books.

We followed the updated Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for systematic reviews (Page et al., 2021). A search strategy building on the 2014 review was compiled in the OvidSP Medline database by an experienced information specialist (JF), and is available as Supplementary File 1. The search included strings of terms, synonyms and controlled vocabulary terms (where available) to reflect three concepts: 'Evidence', 'Barriers and facilitators' and 'policymakers'. The search terms used in this search are very common so we used proximity searches to increase the precision of the search, where this technique was available. In order to capture information from across disciplines and contexts, no geographical, methodological or language limits were applied. This search strategy was refined with the project team until the results retrieved reflected the scope of the project. The agreed OvidSP Medline search was adapted for each database to incorporate database-specific syntax and controlled vocabularies. Fifteen bibliographic databases were searched on 22 June 2022. The search results from the previous review were imported into the EndNote 20 software. Then all citations identified by our updated searches were imported. This allowed accurate updating of results with only items not previously retrieved being put forward for screening. Duplicates were identified and removed in a multi-step method (Falconer, 2018). Results were exported in .ris format from EndNote 20 to EPPI-Reviewer Web software for screening (Thomas, 2010).

Studies were screened initially on title and abstract, all double-screened with Author 1 screening all to ensure consistency. The EPPI-Reviewer Screening Wizard, which uses a learning algorithm to identify the most relevant studies, was used to support the screening. Once inclusion reached >1% inclusion, screening moved to full-text. Full texts were retrieved and stored on EPPI-Reviewer, and then screened for inclusion. All studies were double-screened, with Author 1 screening all on full text.

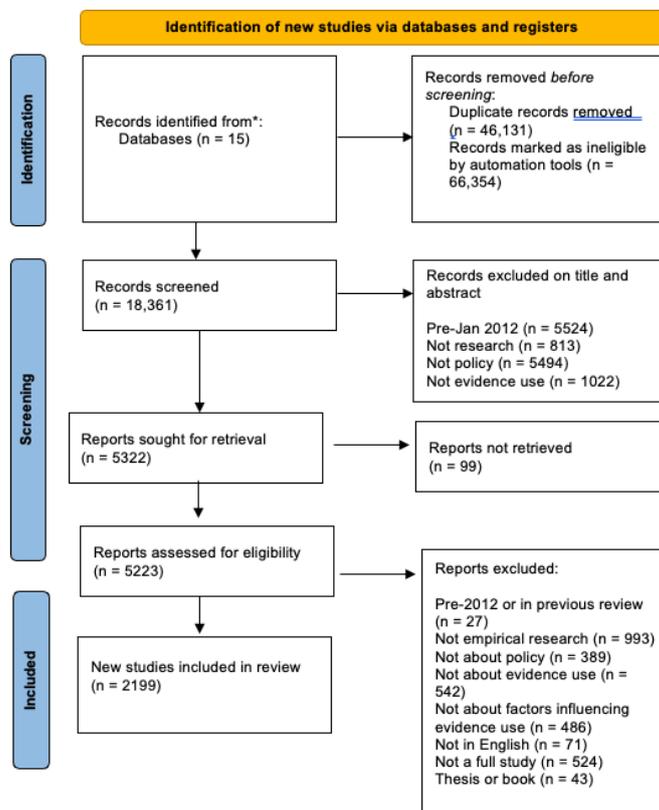
Studies were then coded using a keywording tool, available online at <https://eppi.ioe.ac.uk/eppi-vis/login/open?webdbid=616>. We extracted data on:

- Knowledge domain (i.e. what policy or practice sector, and / or academic discipline the study focused on)
- Focus of the study (describing or evaluating an intervention, impact or measurement of evidence use, feasibility of evidence use, or reporting on factors)
- Primary focus on evidence production (who, how and what knowledge and evidence is created), mobilisation (how knowledge and evidence is translated, made accessible, re-formatted, tailored, shared, or otherwise made more available for users) or use (focusing on how knowledge and evidence forms part of decision-making processes and settings)
- Definitions and types of evidence referred to in the study (e.g. systematic reviews, surveillance data, evaluation data)
- Characteristics of the study (country, study design, data collected, level of policy)
- Factors influencing evidence use, organised by evidence characteristics, policy characteristics, contact and collaboration, organisation and resources, researcher characteristics, policymaker characteristics, intermediary characteristics, and other participants
- Types of interventions (if applicable)

### Findings:

A total of 130,862 results were retrieved by the database searches. After de-duplication (n = 46,131 (35%)), screening on title and abstract (n = 18,175), and screening on full text (n = 5444), 2199 studies were included on full text. All studies were double-data extracted, to enable descriptive analyses characterising studies in terms of focus, topic area, setting, and types of factors influencing use. The flow of studies through the review can be seen in Figure 1. A full set of visualisations and data from the review is available at <https://eppi.ioe.ac.uk/eppi-vis/Review/Index/616>.

Figure 1: Flow of studies through the review

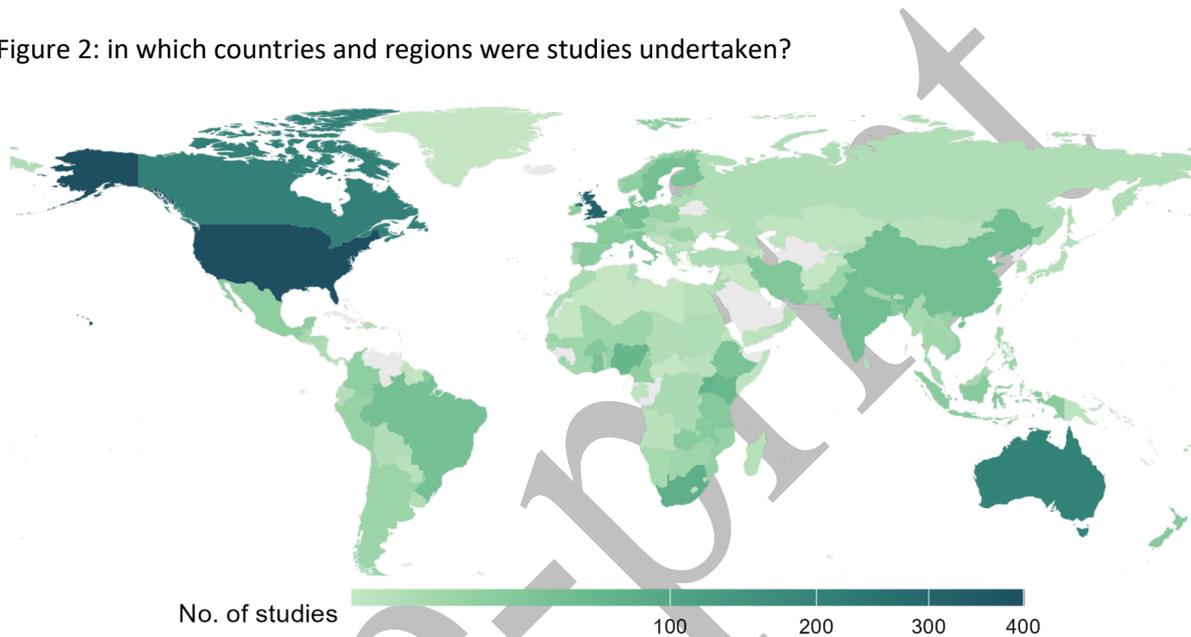


### Characteristics of included studies

There has been a huge increase in the number of studies in this field, with 2,199 studies included in this update. The previous review included 145 studies between 2000-2012, averaging one included paper per month. Over the time period included for this review, this had increased to over 23 studies per month.

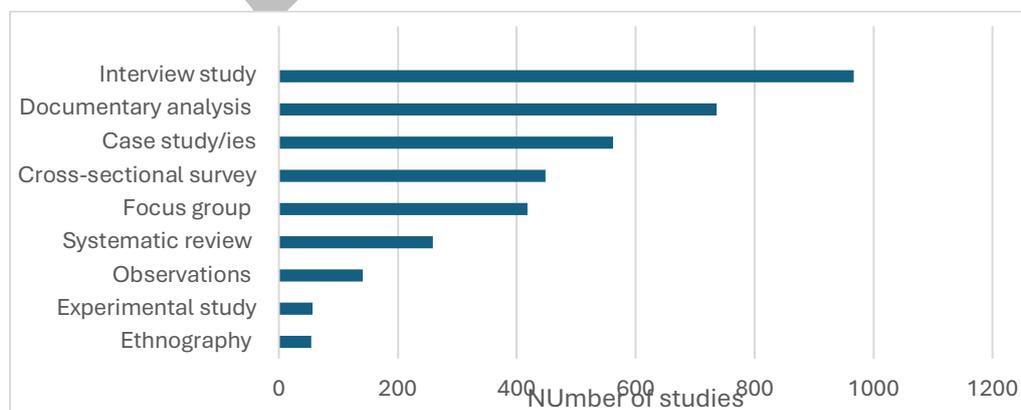
The most frequently reported country setting was the USA (n = 400), followed by the UK (n = 317), Canada (n = 210), Australia (n = 203) and South Africa (n = 79). One hundred and thirteen countries or principalities had 10 or fewer studies. Six hundred and forty-seven studies (29%) were conducted in Asia, South and Central America, and Africa.

Figure 2: in which countries and regions were studies undertaken?



Most of the studies in the review (57%), used interviews or cross-sectional surveys, or both. However, we also identified 259 systematic reviews: an average of one new systematic review on this topic every two weeks. This category included all types of systematic syntheses, from maps to realist reviews, meta-ethnographies and meta-analyses. The Case studies code (n = 562) was used to describe studies taking an in-depth approach to study one or more settings, relying on one or more data collection approach.

Figure 3. Data collection methods used by included studies

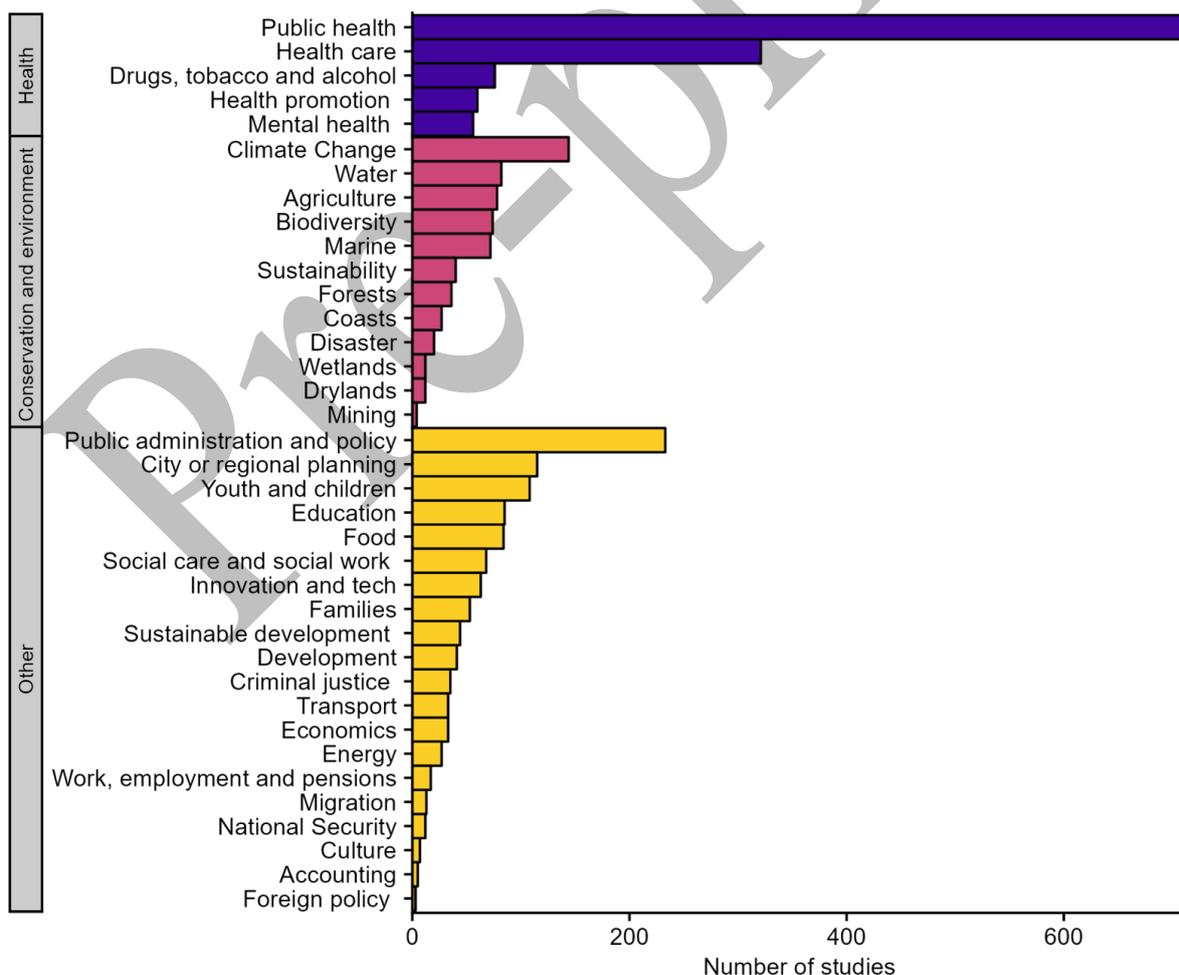


We found a high number of documentary analyses (n = 736), which included analyses of legislative documents, policy and strategy publications, as well as emails and other archival material. Observations (n = 141) were used to describe studies where researchers had drawn on online or in-person meetings and discussions, and focus groups (n = 418) described any workshop or meeting or group interview. Ethnography (n = 54) was used to describe studies which explicitly used this term or a defined related approach (e.g. anthropological enquiry). Finally, we also found 57 experimental studies which was an entirely new category.

Around half of the studies reported policymakers' views and experiences (n = 1139), with researchers (n = 1002), practitioners (n = 887), civil society (n = 306), industry and private sector (n = 220) and politicians (n = 125) also represented. Knowledge brokers (n = 164) and funders (n = 91) were two new categories coded. Most studies were about national policy (n = 1020), with international (n = 181), regional (n = 609) and local (n = 506) all heavily researched.

A large proportion of studies were about health (n = 1294, 58%) with 57% of those (n = 735) about public health in particular. Health care (n = 321), health promotion (n = 60), drugs, alcohol and tobacco (n = 76) and mental health (n = 56) constituted significant sections of the evidence base. Perhaps unsurprisingly, COVID-19 was mentioned in around 20% of all papers published since 2020 (n = 134).

Figure 4. Which sectors and disciplines are represented in the review?



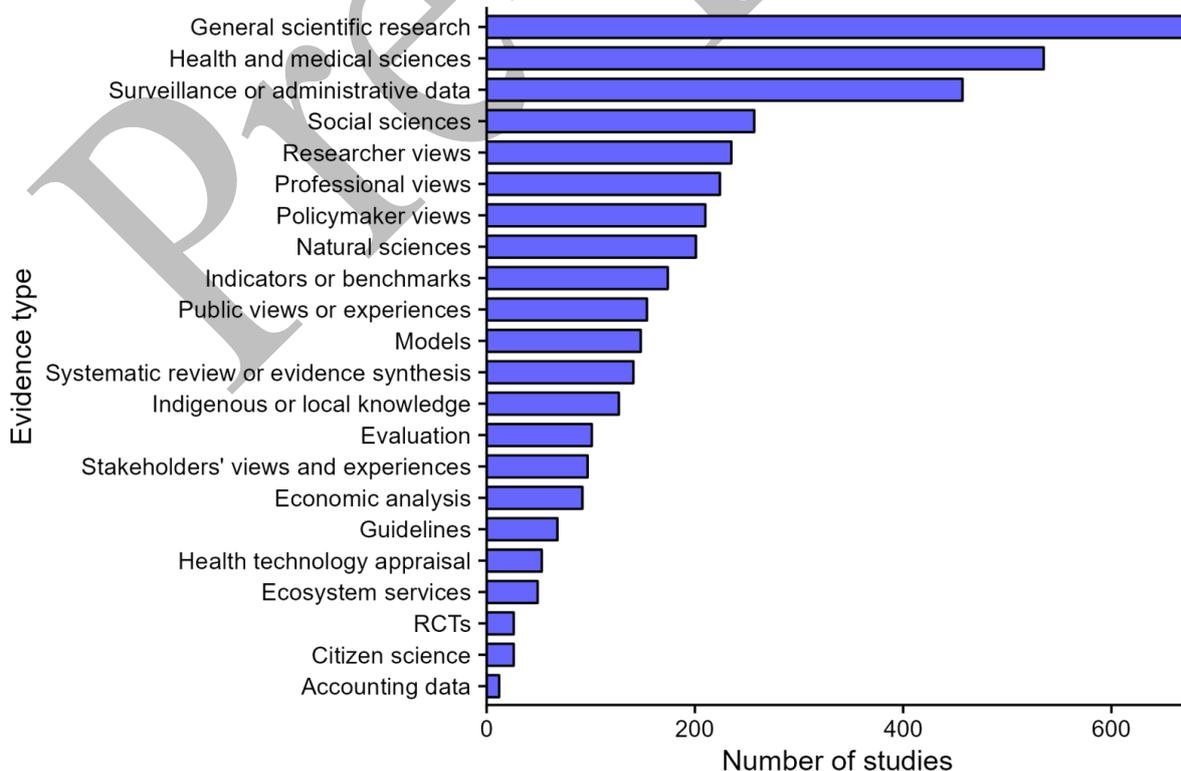
Twenty-five percent (n = 548) of studies focused on conservation and environmental issues. Within this category, climate change was a frequent focus (n = 144), with water (n = 82), agriculture (n = 78), biodiversity (n = 74) and forests (n = 36) also well-represented. Development (n = 41) and sustainable development (n = 44) were substantial literatures. Overall, the sustainable development goals were mentioned in 201 studies.

Other sectors included public administration, which was used to describe public policy generally, as well as government and legislature studies (n = 233). Social care and social work (n = 68), children and youth (n = 108), and families (n = 53) were well-represented, perhaps reflecting the growth in research funding for evidence use studies in these fields. City and regional planning (n = 115), education (n = 85), food (n = 84) and innovation and technology (n = 63) were also significant literatures with criminal justice (n = 35), transport (n = 33), economics (n = 33), and energy (n = 27) similarly-sized. Newly-identified in this review, compared with the 2014 sectors, were foreign policy (n = 3), accounting (n = 5), work and pensions (n = 17), migration (n = 13), and national security (n = 12).

### What type of evidence was being studied?

We coded studies according to what they meant by ‘evidence’, i.e. what types of evidence and knowledge was being utilised, or potentially utilised by participants in the studies. We coded studies which did not define what they meant by evidence as ‘general scientific research’, (n = 674). Other than this category, included studies most commonly focused on evidence from health and medical science (n = 535). Almost one fifth focused on evidence from professional expertise (comprising public, professional and policymaker views; n = 414). There is a notable subset of studies focusing on evidence from public knowledge (n = 154), indigenous or local knowledge (n = 127), and citizen science (n = 26).

Figure 5: Which types of evidence did include studies focus on?



There has been a large increase in the number of studies looking at the use of surveillance and administrative data (n = 457) or indicators (n = 174), as opposed to research evidence. Some studies focused on specific types of research or other formal data, such as systematic reviews in specific fields (n = 141, of which 22 were systematic reviews themselves), models and modelling (n = 148), evaluation (n = 101), or economic analyses (n = 92). Perhaps surprisingly, given the extensive research already in this area, 26 studies focused on the use of randomised controlled trials.

### Factors influencing evidence use

Because of the scale of the review, we decided to code factors rather than barriers and facilitators, as so many papers report the same factors as acting as both. It is not possible to reference every study which reports these factors, so examples have been chosen for interest and representativeness. All studies can be identified in the online dataset. The most frequently reported factor overall was the relevance of evidence (n = 1069), followed by staffing and personnel (n = 1019), opportunities and resources for contact (n = 960), material resources such as access to research, data and equipment (n = 943), and type of evidence (n = 906). In comparison, the top 5 factors identified in the 2014 review were availability and access to research (n = 63), clarity and relevance of research findings (n = 54), collaboration (n = 49), timing and opportunity for collaboration (n = 42), and relationships (n = 39).

Table 1: Most frequently-reported factors influencing evidence use (>10% studies)

Factor influencing evidence use	Number of studies (total 2199)	% of total studies
Relevance and function of evidence	1069	49%
Staff and personnel resources	1019	46%
Opportunities and resource for contact	960	44%
Material resources - access to research and data	943	43%
Type of evidence	906	41%
Managerial support	833	38%
Communication channels	694	32%
Context of decision-making	676	31%
Funding	652	30%
Availability of evidence	641	29%
Participatory, collaborative research	466	21%
Other pressures on policy	422	19%
Content of evidence, i.e. research findings	411	19%
Opportunities for new relationships	361	16%
Organisational culture	351	16%
Trust	333	15%
Legislative support	329	15%
Researchers' skills	329	15%
Framing	325	15%
Researchers' policy awareness	316	14%
Maintaining relationships	285	13%
Time	274	12%
Legitimacy of evidence	268	12%
Pre-existing relationships	260	12%

We used categories derived from the previous review to group these individual factors together. A single study could report one or multiple factors, and under one or multiple categories.

Table 2: Number of studies reporting factors influencing evidence use

Category of factor	Number of studies overall	Factor	Studies reporting this factor
Evidence characteristics	1782	Type of evidence	906
		Source of evidence	520
		Availability	641
		Credibility	567
		Legitimacy	268
		Actionable	529
		Accessibility	508
		content (i.e. what it says)	411
Policy characteristics	925	Relevance, function	1069
		importance of policy	176
		other pressures on policy	422
		Context of decision-making	676
Contact and collaboration	1336	Framing	325
		Timing	193
		Pre-existing relationships	260
		Trust	333
		Opportunities for new relationships	361
		Maintaining relationships	285
		Opportunities and resource for contact	960
		Participatory, collaborative research	466
Organisation and resources	1659	Transparency	154
		Managerial support	833
		Legislative support	329
		Staff and personnel resources	1019
		Material resources - access to research and data	943
		Turnover and continuity	147
		Funding	652
		Communication channels	694
		Time	274
Researcher characteristics	560	Culture	351
		Skills	329
		Policy awareness	316
		Will/interest	190
Policymaker characteristics	978	Credibility	142
		Will and support	652
		Research awareness	453
Research skills			360
Factors relating to Intermediaries (funders, media, knowledge brokers, NGOs)			419
Characteristics of other participants			255

The most frequently-reported category was evidence characteristics (n = 1782), followed by organisation and resources (n = 1659), contact and collaboration (n = 1336), policymaker characteristics (n = 978, policy characteristics (n = 925) and researcher characteristics (n = 560). We also identified two new categories of factors relating to intermediaries such as funders and knowledge brokers (n = 419), and characteristics of other participants, such as industry or the public (n = 255).

*Evidence characteristics* were reported to influence evidence use by policymakers. The provision of easily accessible, relevant, and actionable evidence remains a major factor affecting evidence use. A significant number of studies discussed the legitimacy and credibility of evidence, often in relation to source or funding, but also around politicisation of evidence and of research organisations. Credibility was discussed as being related to rigour, peer review, and research quality as well as more political qualities such as objectivity and partisanship (e.g. (Donadelli, 2020, Bogenschneider, 2020). Within 'type of evidence', the methodology used (e.g. qualitative vs. quantitative epistemologies) was not commonly reported as a factor influencing evidence use, with more focus on, e.g. consensus (Mabon et al., 2019, Goldman et al., 2020) and uncertainty (Bromley-Trujillo and Karch, 2021, Knaggård, 2014). However, the content of evidence was mentioned in several studies - for example whether a research study explicitly demonstrated a policy was ineffective or harmful (Mitchell and Font, 2017).

*Organisation and Resources* was the second largest category overall. Factors relating to managerial support, access to data and research, and communication channels were also reflected in the earlier review. In addition, we found a large focus on leadership and systems management. Three hundred and twenty-nine studies focused on legislative support for evidence use, which included government legislative requirements (e.g. the USA's Foundations for Evidence-Based Policymaking Act of 2018), as well as institutionalisation of evidence (Mabon et al., 2019). Leadership was not a factor identified in advance of the review, but was discussed in relation to evidence use as a key facilitator, through championing evidence use, modelling behaviour, developing accountability mechanisms for evidence use including regulatory requirements, and leading to organisational culture change such as recruitment patterns (Goldman et al., 2020, Allen et al., 2018, Aryeetey et al., 2017, Sinead, 2013, Connolly, 2020). Multiple roles for leaders were discussed, such as promoting formal science systems (Cressman et al., 2021), developing policy frameworks for evaluation and data sharing (Tantivess et al., 2019), and developing and supporting systems for feedback and adaptive learning within policy organisations (Tobin et al., 2022, Hirschfeld, 2020). The relative importance of good leadership particularly within fragile organisations and systems (i.e. those liable to change and pivot away from evidence as a cultural priority) was also emphasised (Shroff Zubin et al., 2015).

*Contact and collaboration* factors remain highly discussed in the literature, with trust, collaboration and relationships all being highly reported. Three hundred and thirty-three studies reported on trust as a factor, and also a significant proportion discussing participatory or collaborative research, i.e. engaging in collaborative research activities as a factor (n = 466). However, the high number of studies in this category can nearly all be accounted for by one factor, 'opportunities for resources and contact', which accounts for over 71%.

*Researcher characteristics* were reported in five hundred and sixty studies. These were barely reported in the earlier review, but here researcher's skills (often to do with engagement with policy stakeholders), their awareness of policy and their motivation and will to address policy needs, and their overall credibility were all frequently mentioned. In the earlier review, *Policymaker characteristics*, particularly their research skills, were often reported. Here, research skills are still frequently reported but policymaker awareness of research (n = 453) and their will and support for evidence use (n = 652) are more commonly referenced. *Policy Characteristics*, i.e. the political

context, policy framing and other pressures were very frequently reported, in over nine hundred included studies (42%).

*Characteristics of intermediaries and other participants* were reported in 419 and 255 studies respectively. Both were new categories and not subdivided further. (Cole et al., 2021, Reckhow and Tompkins-Stange, 2018, Cochrane and McGilloway, 2017), think tanks (Shaw, 2018, Smith Katherine et al., 2013, Ardila, 2020), or explored the role of the media and social media (Grande et al., 2014, Ndumbe-Eyoh and Mazzucco, 2016, Stucki, 2016, Yanovitzky and Weber Matthew, 2019). Civil society groups and members of the public were included in the ‘other participants’ category.

### Study focus

Most studies focused on the mobilisation of evidence (n = 1093), or its use (n = 837), with fewer focusing on knowledge production (n = 328) (categories exclusive to reflect the primary focus of the study). This appears to be a genuine shift in the literature, as – although not coded in the initial review – most studies then focused on research practices and activities, which we coded as ‘making’ in this review. All studies reported on factors influencing evidence, which was a criterion for inclusion. In addition, they described (n = 546) or evaluated interventions (n = 393), reported on impact and measurement of evidence use (n = 382), or on feasibility of evidence use (n = 114). Table 3 shows how these topics mapped across the three foci of making, mobilising and using evidence:

Table 3: Focus and aim of studies

	Using Evidence	Mobilising Evidence	Making Evidence
Describe an intervention	92 (4%)	365 (17%)	107 (5%)
Impact and measurement of evidence use	205 (9%)	150 (7%)	27 (1%)
Feasibility of research use	42 (2%)	54 (2%)	18 (1%)
Reports on factors influencing evidence use	814 (37%)	1065 (48%)	320 (15%)
Evaluate an intervention (or systematic review of intervention evals)	59 (3%)	260	59 (3%)

Overall, 877 studies reported an intervention, of which 378 studies evaluated an intervention (43%). Nearly all the identified interventions were about the mobilisation of knowledge, i.e. about providing opportunities for knowledge exchange, dialogue or otherwise hastening the translation of knowledge. Within this category, the most frequently reported types of interventions were provision of a resource (such as a local map with indicators, or evidence briefs), training and capacity building (usually aimed at upskilling academics and researchers around policy engagement) and people exchange schemes such as knowledge brokerage or fellowship opportunities.

Within the ‘making’ category, most interventions were about the creation of new research units such as evidence synthesis units, or about provision of research funding to enable research activities. There were also a considerable number of collaborative research projects which were studied as interventions in evidence use, all coded under ‘other research collaboration’.

Overall, a minority of interventions focused on use of evidence, while the majority of evaluated interventions in this space being about training and capacity-building (e.g. of policymakers to use research), or provision of a resource (which in this case would usually be evaluation of whether provision of new data or systems had changed decision-making practices). For example, there were several projects which aimed to design new data platforms or analytic capacities of models

to demonstrate what could be done with better maps / models / estimates (Gourevitch et al., 2019, Bethel Matthew et al., 2014)

Type of intervention	Using Evidence	Mobilising Evidence	Making Evidence	Total
Provision of a resource (e.g. indicators, a database or map)	38 (11)	131 (67)	26 (10)	195 (88)
Training or capacity building	26 (14)	91 (61)	11 (6)	128 (81)
Research infrastructure (e.g. new synthesis unit, funding stream etc)	9 (3)	53 (26)	39 (17)	101 (46)
Policy briefs	11 (4)	67 (45)	10 (6)	88 (55)
Knowledge broker / embedded researcher	9 (3)	68 (35)	6 (4)	83 (42)
Other research collaboration	5 (4)	40 (9)	24 (3)	70 (16)
Policy strategy	21 (4)	34 (13)	10 (3)	65 (20)
Research/policy/practice partnership	11 (6)	32 (16)	10 (4)	53 (26)
Policy dialogues	4 (1)	45 (28)	0 (0)	49 (32)
Advisory committee/structure	12 (1)	31 (10)	1 (0)	44 (11)
Research/practice partnership	4 (2)	29 (10)	9 (7)	42 (19)
Network	4 (1)	29 (16)	6 (2)	39 (19)
Other	6 (3)	24 (11)	7 (1)	37 (15)
Intermediary organisation activity	4 (2)	24 (7)	4 (1)	32 (10)
Research/policy partnership	5 (4)	19 (6)	8 (3)	32 (13)
University-based knowledge exchange	2 (0)	18 (9)	4 (1)	24 (10)
HTA process	1 (0)	15 (3)	1 (1)	17 (4)
Policy labs	3 (1)	8 (3)	3 (2)	14 (6)

Interventions in the 'other' category were either knowledge exchange strategies otherwise unspecified, games (n = 9) or conferences as an intervention (n = 8). Most intervention studies reported on multi-component studies, e.g. a training scheme which also offered mentoring and networking opportunities. Table 4 presents the types of interventions identified in the review.

## Discussion

This systematic map found a huge increase in the size of the literature on the factors that influence evidence use in this space. With over two thousand primary studies, and over 250 systematic reviews, our update describes the findings from an enormous amount of literature about how we make, mobilise, and use evidence in policy. Compared to our previous review, more and more policy sectors and settings at all levels of government are represented in this dataset, from almost every nation on the planet.

The 2014 systematic review identified timely access to relevant research, collaboration between researchers and policymakers, and skills-building with policymakers as the most frequently reported factors influencing evidence use. In this updated systematic map which takes a snapshot of the literature between 2012-22, the importance of accessible and available relevant evidence remains clear as the most reported factor. The language used to describe useful evidence also seems to have shifted, with studies now often using phrases such as 'actionable knowledge'

(Brunet et al., 2018, Gerber Leah et al., 2020, Project, 2021, Nguyen Vivian et al., 2019) rather than 'evidence' which may indicate a shift towards more applied and epistemologically inclusive research. There also seems to be a growth of studies looking at 'engaged' research and scholarship (McIsaac and Riley, 2020, Patel, 2018, Springs et al., 2019) where researchers themselves participate in stakeholders' processes and activities, rather than requiring stakeholders to get involved with research. This responds to calls for greater reflection by researchers, and to recognise that much of the evidence-policy 'gap' can be attributed to problems within academia, rather than to stakeholders' failure to engage with research (Shaw, 2018, Crossgrove et al., 2019, Corluka et al., 2014).

Most of the highest-reported factors were organisational (resources, skills, personnel and managerial support), rather than about contact and collaboration, as was the case with the previous review. This remained the highest category whether papers focused on evidence production, mobilisation or use. This may reflect a growing awareness amongst researchers about the work, time and skill it takes to support evidence use. As Best and Holmes (year) argued, relational factors may be necessary (as is the provision of research itself), but they are not sufficient to ensure evidence utilisation. Effective collaboration and contact require a broader system that provides absorptive capacity, learning, and feedback (2010). The studies in this review and the wider field discussed various aspects of organisational resources, including team culture (Hanlin and Andersen, 2019), performance management and expectations. Discussions about evidence use systems, what they might be and how they might be reported are a feature of the studies in the review, and in the wider field (Amisi Matodzi et al., 2021, Best et al., 2010, Doshmangir et al., 2022, Fynn Judith et al., 2021, Williamson et al., 2019). Discussions about evidence use systems, what they might be and how they might be reported, are a feature of the studies in the review, and in the wider field.

There was a large growth in the number of interventions identified (n = 877). Most of these interventions focused on relational mechanisms to address evidence use, for example collaborative research/policy partnerships, people exchanges like fellowships, or policy dialogues. There were also a significant number about mobilising evidence through more direct translational means, such as formatting into evidence briefs or through data clearing-houses. Most interventions target evidence production and mobilisation. This may mean that interventions are not addressing the identified factors relating to organisational resources or other systemic factors such as leadership. This misalignment could lead to an increase in the number of initiatives which in effect compete with each other, leading to duplication and waste, as is suggested elsewhere in the literature (Hopkins et al., 2021, Oliver et al., 2022). However, an in-depth synthesis of the evaluations would be required to ascertain this fully.

With the proliferation of studies reporting on interventions, including the 877 identified in this review (at an average rate of seven per month), taking a systems perspective will likely be challenging. Ideally, new initiatives would be able to consult existing evaluation of similar interventions before embarking on their own implementation. Given the spread of studies across disciplines and sectors, even identifying these studies is a challenge beyond the resources of many. The evidence use field needs to consider how it can make this learning more available to those who need it, supporting better coordination and use of resources within the overall system (Turner et al., 2021). For example, living systematic reviews of research on evidence use could be developed and maintained, with accompanying open access bibliographic databases and freely available translational products that make this evidence more actionable (Elliott et al., 2021-12-15, Turner et al., 2023-12-18).

## Limitations

This review was limited by the team resources available. As this was unfunded, the team fluctuated in size and required significant training and quality assurance to ensure screening and coding tools were being applied consistently. As a result, Author 1 screened and coded all abstracts and studies to ensure consistency across all coders.

We did not publish an a priori protocol, as this was an updated systematic map and therefore aimed to replicate the methods published in Author 2014. In theory, this made the review vulnerable to changes, although having team members drawn from the earlier review, and adding a professional librarian to the team ensured consistency, comprehensiveness in searches, and rigour in review methods.

The review contains a very wide range of studies. As a result, the coding undertaken is relatively shallow and general, which may have contributed to the interpretation of results by minimising small trends and overlooking unique aspects of subsets of the dataset. We have also been unable to conduct in-depth analyses, but rather offer here a descriptive synthesis which shows the shape of the evidence base in this area, ideally enabling more focused syntheses in the future. Because of this descriptive nature, we do not offer a set of factors which, when combined or addressed in the right way, operate as a recipe for successful evidence use. Rather we offer some insights about the broad field of research which continues to grow.

## Conclusions

Firstly, there are several indicators that a global movement thinking about and supporting evidence use in decision-making continues to grow. The very size of this review is striking. Clearly, the question of evidence use and how it can be better supported only grows in importance across settings, disciplines and sectors. The growth in the literature may be consistent with the overall growth in scientific literature, although an expansion of over 20-fold seems disproportionately large (Hanson et al., 2023). Overall, we conclude that there has been a large growth in studies on evidence. Whether these studies are all high quality is unknown but seems unlikely.

Secondly, there is remarkable consistency across these studies, which suggests that those of us working in this field need to do more to surface what we already know and ensure this learning is shared across boundaries. Hundreds of interventions are being tested across policy sectors to improve the production of relevant evidence and mobilise it effectively. More needs to be done to ensure that this learning is captured and shared between disciplines, and to embed learning from evaluations of interventions into practice. There has been a welcome growth in empirical data and evaluations of evidence use initiatives, and it would be useful for the field to focus on developing and sharing this learning rather than continuing to report on very repetitive factors influencing evidence use.

Finally, given that there is broad consensus about what factors influence evidence use, what can we learn? It seems likely that one-off initiatives work best when supported within a system. Evidence use systems require careful management and coordination, and there has been a significant growth in studies recognising the work and skill required to embed evidence use practices sustainably. For example, factors identified in this review could be used to inform the design and delivery of knowledge mobilisation, knowledge brokering, or even policy fellowship programmes or interventions, with the aim to advance evidence use in policy institutions. The importance of relevance of research to later uptake and use, while not surprising, reinforces the need for stakeholders and the public to be actively involved in the identification and prioritisation of new research addressing policy and practice needs. Our study provides important insights for funders

wishing to support evidence use, in ensuring new initiatives are evidence-based, systems-strengthening, and complementary to existing structures and initiatives.

## References

Author 2014.

- ALLEN, P., JACOB REBEKAH, R., LAKSHMAN, M., BEST LESLIE, A., BASS, K. & BROWNSON ROSS, C. 2018. Lessons Learned in Promoting Evidence-Based Public Health: Perspectives from Managers in State Public Health Departments. *Journal of Community Health*, 43, 856-863.
- AMISI MATODZI, M., AWAL MOHAMMED, S., PABARI, M. & BEDU-ADDO, D. 2021. How relationship and dialogue facilitate evidence use: Lessons from African countries. *African Evaluation Journal*, 9, 1-9.
- ARDILA, D. S. 2020. Global policies for moving cities: the role of think tanks in the proliferation of Bus Rapid Transit systems in Latin America and worldwide. *Policy and Society*, 39, 70-90.
- ARMSTRONG REBECCA, WATERS, E., DOBBINS, M., ANDERSON, L., MOORE, L., PETTICREW, M., CLARK, R., PETTMAN TAHNA, L., BURNS, C., MOODIE, M., CONNING, R. & SWINBURN, B. 2013. Knowledge translation strategies to improve the use of evidence in public health decision making in local government: intervention design and implementation plan. *Implementation science: IS*, 8, 121-121.
- ARYEETEEY, R., HOLDSWORTH, M., TALJAARD, C., HOUNKPATIN WALIOU, A., COLECRAFT, E., LACHAT, C., NAGO, E., HAILU, T., KOLSTEREN, P. & VERSTRAETEN, R. 2017. Evidence-informed decision making for nutrition: African experiences and way forward. *The Proceedings of the Nutrition Society*, 76, 589-596.
- BEST, A., HOLMES, B., BEST, A. & HOLMES, B. 2010. Systems thinking, knowledge and action: towards better models and methods. *Evidence & Policy*, 6.
- BETHEL MATTHEW, B., BRIEN LYNN, F., ESPOSITO MICHELLE, M., MILLER COREY, T., BURAS HONORA, S., LASKA SHIRLEY, B., PHILIPPE, R., PETERSON KRISTINA, J., PARSONS, R. & CAROL 2014. Sci-TEK: A GIS-Based Multidisciplinary Method for Incorporating Traditional Ecological Knowledge into Louisiana's Coastal Restoration Decision-Making Processes. *Journal of Coastal Research*, 30, 1081-1099.
- BOAZ, A., DAVIES, H., FRASER, A. & NUTLEY, S. 2019. *What Works Now?: Evidence-informed policy and practice*, Policy Press.
- BOGENSCHNEIDER, K. 2020. Positioning universities as honest knowledge brokers: Best practices for communicating research to policymakers. *Family Relations: An Interdisciplinary Journal of Applied Family Studies*, 69, 628-643.
- BROMLEY-TRUJILLO, R. & KARCH, A. 2021. Saliency, Scientific Uncertainty, and the Agenda-Setting Power of Science(sic)(sic)(sic)Palabras clave. *Policy Studies Journal*, 49, 992-1018.
- BRUNET, L., TUOMISAARI, J., LAVOREL, S., CROUZAT, E., BIERRY, A., PELTOLA, T. & ARPIN, I. 2018. Actionable knowledge for land use planning: Making ecosystem services operational. *Land Use Policy*, 72, 27-34.
- BUCKLEY, N. & OLIVER, K. 2024. Evaluating Policy to Research Fellowship programmes.
- CAIRNEY, P. 2016. *The Politics of Evidence-Based Policy Making*.
- CHALLENGES, G. C. O. E. T. A. S. 2024. Global Evidence Commission update 2024: Building momentum in strengthening domestic evidence-support systems, enhancing the global evidence architecture, and putting evidence at the centre of everyday life. Hamilton: McMaster Health Forum.
- COCHRANE, A. & MCGILLOWAY, S. 2017. The Role of Philanthropic Funding in Building Research Evidence to Support an Aging Population: A Case Study from Ireland. *Journal of Aging & Social Policy*, 29, 262-275.

- COLE, S., WARDANA, A. & DHARMIASIH, W. 2021. Making an impact on Bali's water crisis: Research to mobilize NGOs, the tourism industry and policy makers. *Annals of Tourism Research Vol 87 2021, ArtID 103119*, 87.
- CONNOLLY, J. 2020. The sustainability of knowledge brokerage of the mental health improvement outcomes framework in Scotland: a follow-up analysis. *Evidence and Policy*, 16, 177-195.
- CORLUKA, A., HYDER, A. A., WINCH, P. J. & SEGURA, E. 2014. Exploring health researchers' perceptions of policymaking in Argentina: a qualitative study. *Health Policy & Planning*, 29 Suppl 2, ii40-9.
- CRESSMAN, C., MILLER FIONA, A., GUTTMANN, A., CAIRNEY, J. & HAYEEMS ROBIN, Z. 2021. Policy Rogue or Policy Entrepreneur? The Forms and Impacts of "Joined-Up Governance" for Child Health. *Children*, 8, 13-13.
- CROSSGROVE, F., VANESSA, SARGEANT-HU, S., SCHNEIDER, J., ANDERSON, C. & OLSON, E. 2019. "Convoluting Journeys": Integrating Nonprofit Organizations and University Science. *Society & Natural Resources*, 32, 239-254.
- CROWLEY, D. M., SCOTT, J. T., LONG, E. C., GREEN, L., GIRAY, C., GAY, B., ISRAEL, A., STORACE, R., MCCAULEY, M. & DONOVAN, M. 2021. Cultivating researcher-policymaker partnerships: A randomized controlled trial of a model for training public psychologists. *American Psychologist*, 76, 1307-1322.
- DONADELLI, F. 2020. When evidence does not matter: The barriers to learning from science in two cases of environmental policy change in Brazil. *Science & Public Policy (SPP)*, 47, 313-321.
- DOSHMANIR, L., MOSTAFAVI, H., BEHZADIFAR, M., YAZDIZADEH, B., SAJADI, H. S., HASANPOOR, E., MAHDAVI, M. & MAJZADEH, R. 2022. Individual and institutional capacity-building for evidence-informed health policy-making in Iran: a mix of local and global evidence. *Health Research Policy & Systems*, 20, 18-18.
- ELLIOTT, J., LAWRENCE, R., MINX, J. C., OLADAPO, O. T., RAVAUD, P., TENDAL JEPPESEN, B., THOMAS, J., TURNER, T., VANDVIK, P. O., GRIMSHAW, J. M., ELLIOTT, J., LAWRENCE, R., MINX, J. C., OLADAPO, O. T., RAVAUD, P., TENDAL JEPPESEN, B., THOMAS, J., TURNER, T., VANDVIK, P. O. & GRIMSHAW, J. M. 2021-12-15. Decision makers need constantly updated evidence synthesis. *Nature 2021 600:7889*, 600.
- ETZKOWITZ, H. 2006. The new visible hand: An assisted linear model of science and innovation policy. *Science and Public Policy*, 33.
- EVIDENCE, P. P.-A. C. F. 2024. *A non-profit organisation dedicated to supporting the use of evidence to reduce poverty and inequality in Africa*. [Online]. Available: <https://pace-evidence.org/> [Accessed].
- FALCONER, J. 2018. Removing duplicates from an EndNote library. *Library & Archives Service Blog: London School of Hygiene & Tropical Medicine* [Online].
- FYNN JUDITH, F., JONES, J. & JONES, A. 2021. A systems approach to the exploration of research activity and relationships within a local authority. *Health Research Policy & Systems*, 19, 1-13.
- GERBER LEAH, R., BARTON CHRIS, J., CHENG SAMANTHA, H. & ANDERSON, D. 2020. Producing actionable science in conservation: Best practices for organizations and individuals. *Conservation Science & Practice*, 2, 1-15.
- GOLDMAN, G. T., CARTER, J. M., WANG, Y. & LARSON, J. M. 2020. Perceived losses of scientific integrity under the Trump administration: A survey of federal scientists. *PLoS ONE [Electronic Resource]*, 15, e0231929-e0231929.
- GOUREVITCH, M. N., ATHENS, J. K., LEVINE, S. E., KLEIMAN, N. & THORPE, L. E. 2019. City-Level Measures of Health, Health Determinants, and Equity to Foster Population Health Improvement: The City Health Dashboard. *American Journal of Public Health*, 109, 585-592.
- GRANDE, D., GOLLUST, S. E., PANY, M., SEYMOUR, J., GOSS, A., KILARU, A. & MEISEL, Z. 2014. Translating research for health policy: researchers' perceptions and use of social media. *Health Affairs*, 33, 1278-1285.

- HANLIN, R. & ANDERSEN, M. H. 2019. Putting knowledge flows front and centre in health systems strengthening. *Innovation and Development*, 9, 169-186.
- HANSON, M., PG, B., P, C. & D, B. 2023. The strain on scientific publishing. *arXiv preprint*, preprint arXiv:2309.15884.
- HIRSCHFELD, D. H. K., RIORDAN B 2020. The regional fingerprint: A new tool to evaluate adaptive capacity. *Environmental Science & Policy*, 112, 36.
- HOLMES, B. J., BEST, A., DAVIES, H., HUNTER, D., KELLY, M. P., MARSHALL, M., RYCROFT-MALONE, J., HOLMES, B. J., BEST, A., DAVIES, H., HUNTER, D., KELLY, M. P., MARSHALL, M. & RYCROFT-MALONE, J. 2017. Mobilising knowledge in complex health systems: a call to action. *Evidence & Policy*, 13.
- HOPKINS, A., OLIVER, K., BOAZ, A., GUILLOT-WRIGHT, S. & CAIRNEY, P. 2021. Are research-policy engagement activities informed by policy theory and evidence? 7 challenges to the UK impact agenda. *Policy Design and Practice*, 4, 341-356.
- INNVAER, S. 2002. Health policy-makers' perceptions of their use of evidence: a systematic review - PubMed. *Journal of health services research & policy*, 7.
- KNAGGÅRD, Å. 2014. What do policy-makers do with scientific uncertainty? The incremental character of Swedish climate change policy-making. *Policy Studies*, 35, 22-39.
- KUMPUNEN, S., BRIDGWOOD, B., IRVING, G., AMUTHALINGAM, T., MATTHEWS, J., PETTIGREW, L. M., KUMPUNEN, S., BRIDGWOOD, B., IRVING, G., AMUTHALINGAM, T., MATTHEWS, J. & PETTIGREW, L. M. 2023. Workplace-based knowledge exchange programmes between academics, policymakers and providers in the health and social care sector: a scoping review and mapping exercise. *Humanities and Social Sciences Communications* 2023 10:1, 10.
- LAVIS, J. N., OXMAN, A. D., SOUZA, N. M., LEWIN, S., GRUEN, R. L., FRETHEIM, A., LAVIS, J. N., OXMAN, A. D., SOUZA, N. M., LEWIN, S., GRUEN, R. L. & FRETHEIM, A. 2009. SUPPORT Tools for evidence-informed health Policymaking (STP) 9: Assessing the applicability of the findings of a systematic review. *Health Research Policy and Systems* 2009 7:1, 7.
- MABON, L., SHIH, W.-Y., KONDO, K., KANEKIYO, H. & HAYABUCHI, Y. 2019. What is the role of epistemic communities in shaping local environmental policy? Managing environmental change through planning and greenspace in Fukuoka City, Japan. *Geoforum*, 104, 158-169.
- MCISAAC, J. L. D. & RILEY, B. L. 2020. Engaged scholarship and public policy decision-making: A scoping review. *Health Research Policy and Systems*, 18(1) (no

## Background:

Researchers have often tried to identify the factors preventing research evidence from being used by policymakers and practitioners. Much of the research in this area has framed this in terms of barriers and facilitators (Oliver et al., 2014). This framing encourages approaches which target particular factors, which, if addressed, would hasten the uptake of research evidence (Orton, 2011). Such approaches reflect the linear model, whereby research evidence is produced, it is mobilised through various means (such as research dissemination, or stakeholder engagement) and then used to address a policy or practice problem (Best et al., 2010).

It is now recognised that the linear model is an over-simplification of the process by which decision-makers draw on evidence (4, 5) (Etzkowitz, 2006). Best and Holmes (2010) describe this evolution as ‘generations’ of thinking about evidence use: Linear, relational and systemic. ‘Linear’ thinking describes a focus on knowledge production as the primary means to improve evidence use, and ultimately decision-making. In the early 2000s, in the UK and much of the Global North, this thinking translated into a focus on systematic reviews to improve evidence use (6-8) (Oliver, 2001, Perrier et al., 2011, Lavis et al., 2009). This thinking is still evident with much of the funding and activity in the field focusing on research production and evaluation (currently often called Metascience, or Research on Research) (Oliver et al., 2019).

‘Relational’ thinking, and working, has had a significant impact on how evidence research and practice has evolved, with the last large systematic map of factors influencing evidence identifying relational factors as highly reported (Author 2014). Typically, relational initiatives assume that contact between knowledge users and producers is likely to result in greater trust between stakeholders, the production of useful knowledge, and its use by decision-makers. From the development of fellowship schemes (Kumpunen et al., 2023, Buckley and Oliver, 2024), to initiatives providing networking and match-making opportunities (Crowley et al., 2021), to longer-term collaborations (Armstrong Rebecca et al., 2013, Pettigrew, 2019) the last ten years has seen a huge increase in the number of evidence use initiatives which draw on this type of thinking. Co-production is now much more common in research and knowledge production, reflecting this shift (Turnhout et al., 2020).

Yet, as Best and Holmes argued in 2010, ‘systems’ thinking may offer a more useful perspective. They argued that conceptualising evidence use as a process that occurs within a complex system more accurately depicts the dynamic process of knowledge (co-)production and evidence uptake - and that this perspective can better inform the design of initiatives (Holmes et al., 2017, Best et al., 2010, Oliver et al., 2022). There is now a general consensus that decision-makers draw upon a wide range of types of knowledge, and that how they do so is a complex, dynamic process (Cairney, 2016, Boaz et al., 2019, Innvaer, 2002).

Why, then, is it worth considering the somewhat linear question of how factors influence evidence use? Thinking about barriers and facilitators can encourage thinking which responds to factors as a menu of targets for interventions, or a pick-and-mix recipe for success. In our view, this type of approach is unlikely to support effective evidence use practice.

It is therefore important to assess the empirical state of evidence in order to inform research and practice. Funders, governments, researchers and practitioners all demonstrate a growing interest in evidence use. There has been a huge growth in evidence use initiatives (Oliver et al., 2022) and in the increase in global attention towards how evidence-using systems can be better supported (Topp et al., 2018, Evidence, 2024, Challenges, 2024). Rather than addressing single factors to

- MITCHELL, J. & FONT, X. 2017. Evidence-based policy in Ethiopia: A diagnosis of failure. *Development Southern Africa*, 34, 121-136.
- NDUMBE-EYOH, S. & MAZZUCCO, A. 2016. Social media, knowledge translation, and action on the social determinants of health and health equity: A survey of public health practices. *Journal of Public Health Policy*, 37, 249-259.
- NGUYEN VIVIAN, M., YOUNG, N., BROWNSCOMBE JACOB, W. & COOKE STEVEN, J. 2019. Collaboration and engagement produce more actionable science: quantitatively analyzing uptake of fish tracking studies. *Ecological applications : a publication of the Ecological Society of America*, 29, e01943-e01943.
- OLIVER, K., BOAZ, A., 2019. Transforming evidence for policy and practice: creating space for new conversations. *Palgrave Communications* 2019 5:1, 5.
- OLIVER, K., HOPKINS, A., BOAZ, A., GUILLOT-WRIGHT, S., CAIRNEY, P., OLIVER, K., HOPKINS, A., BOAZ, A., GUILLOT-WRIGHT, S. & CAIRNEY, P. 2022. What works to promote research-policy engagement? *Evidence & Policy*, 18.
- OLIVER, K., INNVAR, S., LORENC, T., WOODMAN, J., THOMAS, J., OLIVER, K., INNVAR, S., LORENC, T., WOODMAN, J. & THOMAS, J. 2014. A systematic review of barriers to and facilitators of the use of evidence by policymakers. *BMC Health Services Research* 2014 14:1, 14.
- OLIVER, S. P., GREET (ed.) 2001. *Using Research for Effective Health Promotion*: McGraw-Hill Education.
- ORTON, L. 2011. The use of research evidence in public health decision making processes: systematic review - PubMed. *PLoS one*, 6.
- PAGE, M. J., MCKENZIE, J. E., BOSSUYT, P. M., BOUTRON, I., HOFFMANN, T. C., MULROW, C. D., SHAMSEER, L., TETZLAFF, J. M., AKL, E. A., BRENNAN, S. E., CHOU, R., GLANVILLE, J., GRIMSHAW, J. M., HRÓBJARTSSON, A., LALU, M. M., LI, T., LODER, E. W., MAYO-WILSON, E., MCDONALD, S., MCGUINNESS, L. A., STEWART, L. A., THOMAS, J., TRICCO, A. C., WELCH, V. A., WHITING, P. & MOHER, D. 2021. The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. *BMJ*, 372.
- PATEL, Z. 2018. The role of engaged scholarship and co-production to address urban challenges: a case study of the Cape Town Knowledge Transfer Programme. In: PATEL, Z. (ed.). Routledge.
- PERRIER, L., MRKLAS, K., LAVIS, J. N., STRAUS, S. E., PERRIER, L., MRKLAS, K., LAVIS, J. N. & STRAUS, S. E. 2011. Interventions encouraging the use of systematic reviews by health policymakers and managers: A systematic review. *Implementation Science* 2011 6:1, 6.
- PETTIGREW, L. M. 2019. Lessons for 'large-scale' general practice provider organisations in England from other inter-organisational healthcare collaborations. *Health Policy*, 123.
- PROJECT, E. 2021. *Actionable evidence: toward equitable outcomes: practical framework for research, evaluation, and technical assistance in the education and social sectors*, Project Evident.
- RECKHOW, S. & TOMPKINS-STANGE, M. 2018. Financing the education policy discourse: philanthropic funders as entrepreneurs in policy networks. *Interest Groups & Advocacy*, 7, 258-288.
- SHAW, J. 2018. How can research mediators better mediate?: the importance of inward-looking processes. *Evidence & Policy*, 14, 143-153.
- SHROFF ZUBIN, AULAKH, B., GILSON, L., AGYEPONG IRENE, A., EL-JARDALI, F. & GHAFAR, A. 2015. Incorporating research evidence into decision-making processes: researcher and decision-maker perceptions from five low- and middle-income countries. *Health research policy and systems*, 13, 70-70.
- SINEAD, H. 2013. Evidence, policy and pragmatics: a case study on the development of a national research and data strategy on children's lives and the role of knowledge exchange. *Evidence and Policy*, 9, 29-42.
- SMITH KATHERINE, E., KAY, L. & TORRES, J. 2013. Think tanks as research mediators? Case studies from public health. *Evidence & Policy*, 9, 371-390.

- SPRINGS, S., ROFEBERG, V., BROWN, S., BOUDREAU, S., HEY, S. P. & BARUCH, J. 2019. Community-engaged Evidence Synthesis to Inform Public Health Policy and Clinical Practice: A Case Study. *Medical Care*, 57 Suppl 10 Suppl 3, S253-S258.
- STUCKI, I. 2016. The use of evidence in public debates in the media: the case of Swiss direct-democratic campaigns in the health policy sector. *Evidence & Policy*, 12, 487-504.
- TANTIVESS, S., YOTHASAMUT, J. & SAENGSR, W. 2019. Utilisation of evidence from Thailand's National Health Examination Survey in policy development: finding the weakest link. *Health Research Policy & Systems*, 17, 104-104.
- THOMAS, J. B., J; GRAZIOSI S 2010. EPPI-Reviewer 4.0: Analysis and Management of Data for Research Synthesis. EPPI-Centre Software. London: EPPI-Centre.
- TOBIN, R., CRAWFORD, G., HALLETT, J., MAYCOCK, B. R. & LOBO, R. 2022. Critical factors that affect the functioning of a research and evaluation capacity building partnership: A causal loop diagram. *PLoS ONE [Electronic Resource]*, 17, e0262125-e0262125.
- TOPP, L., MAIR, D., SMILLIE, L. & CAIRNEY, P. 2018. Knowledge management for policy impact: the case of the European Commission's Joint Research Centre. *Palgrave Communications*, 4.
- TURNER, S., ULLOA, A. M., NINO, N. & VALENCIA, G. 2021. The Role of Intersectoral Action in Response to COVID-19: A Qualitative Study of the Roles of Academia and the Private Sector in Colombia. *International journal of health policy and management.*, 30.
- TURNER, T., LAVIS, J. N., GRIMSHAW, J. M., GREEN, S., ELLIOTT, J., TURNER, T., LAVIS, J. N., GRIMSHAW, J. M., GREEN, S. & ELLIOTT, J. 2023-12-18. Living evidence and adaptive policy: perfect partners? *Health Research Policy and Systems* 2023 21:1, 21.
- TURNHOUT, E., METZE, T., WYBORN, C., KLENK, N. & LOUDER, E. 2020. The politics of co-production: participation, power, and transformation. *Current Opinion in Environmental Sustainability*, 42.
- WILLIAMSON, A., BARKER, D., GREEN, S., D'ESTE, C., DAVIES HUW, T. O., JORM, L., SHAKESHAFT, A., RUDGE, S. & REDMAN, S. 2019. Increasing the capacity of policy agencies to use research findings: a stepped-wedge trial. *Health research policy and systems*, 17, 14-14.
- YANOVITZKY, I. & WEBER MATTHEW, S. 2019. News media as knowledge brokers in public policymaking processes. *Communication Theory*, 29, 191-212.